Innovations in Management Accounting Research & Practice: Whatever happened to Throughput Accounting?

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Paper presented at the EIASM 6th Conference on new directions in management accounting, Brussels, December 15-17 2008.

Abstract

Despite the identification of the potential to undertake scholarly research in Throughput Accounting (TA) (Noreen et al, 1995; Dugdale & Jones, 1998; Jones & Dugdale, 1998), to date there has been a paucity of published studies of TA. This paper argues that TA, and the production management system it supports – the Theory of Constraints (TOC) are fads/fashions in accordance with Abrahamson's (1996) framework and posits that negative connotations regarding the term fads/fashions along with the likening of management fads/fashions to aesthetic fads/fashions could be likely reasons for the lack of scholarly interest from accounting researchers. Furthermore, this paper extends the management fads/fashions literature by extending the debate to include accounting academics and research networks. It is argued that accounting researchers, accounting research agendas and accounting research networks can be deemed to be fads/fashions as they exhibit many of the characteristics of management fads/fashions including, lifecycles, rhetoric and gurus. Such a classification however, does not rule out the potential for theoretically sound scholarly research, rather it widens the opportunities for researchers.

This paper demonstrates empirically that TA is a topic worthy of inclusion in research agendas. TOC implementation causes several changes to management control systems and uses accounting information as the primary method of production scheduling. In addition, operational staff in firms with TOC use accounting information to plan and manage their work on a daily basis. Firms with TOC change the way they measure and evaluate performance as well as include throughput information in their capital budgeting processes. It is argued that a firm which implements TOC will change its Management Control System particularly in relation to overhead allocation and the dissemination of financial information to all levels of the firm. These changes are driven by an apparent paradigm shift in operational thinking by managers and staff of firms that have implemented TOC. Furthermore these changes are significant enough to warrant further investigation into TA and the processes relating to management control system change. This paper concludes with some suggestions for future research and poses some challenges to accounting scholars.

1. Introduction

The Theory of Constraints (TOC) and throughput accounting[1] (TA) have been identified as potentially important developments in management accounting research and practice (Noreen et al, 1995; Dugdale & Jones, 1998; Jones & Dugdale, 1998). More specifically Dugdale & Jones (1998) identified several areas for research, including the implications for accounting systems in companies which had undergone a "paradigm shift" in perceptions and values relating to manufacturing following the implementation of TOC, the role of critical success factors in the design of accounting systems, and the development of accounting measures to support TOC. Despite this, few studies of TA have been published in accounting journals. This paper argues that it is timely for management accounting researchers to re-visit TA and make it the focus of scholarly research.

There are rare examples of studies that incorporate TA; however these have been mainly published in the production management literature and these studies give little insight into the use or value of TA systems. The common theme of this body of literature is the use of TA to support decision-making (Long, Castellano & Roehm, 2002; Boyd & Cox, 2002: Corbett, 2006) in particular product-mix decisions (Himola, 2001; Souren, Ahn & Schmitz, 2005; Hilmola, 2005), the blending of TOC and activity-based costing (ABC) (Gupta, 2001; Gupta, Baxendale & Raju, 2002; Lea & Min, 2003; Kirche, Kadipasaoglu & Khumawala, 2005) and performance measurement (Lockamy & Spencer, 1998).

This paper proposes reasons for the dearth of interest in TA in comparison to other innovations in management accounting such as activity-based costing (ABC), the balanced scorecard (BSC), economic-value added (EVA) and the new public management (NPM). Using the management fad/fashion literature this paper proposes that the adoption and diffusion of TA and TOC exhibit many of the characteristics identified by Abrahamson (1996) as being fads/fashions. In addition, the management fads and fashions concept is extended through an extension of the literature into the area of scholarly accounting research agendas. It is argued that TA is not perceived by scholars as being sufficiently different or novel to warrant inclusion in a research agenda. In particular, it is argued that TA's consideration as a fad/fashion and its lack of an academic guru has contributed to the academic disinterest to date. These are factors which do not represent fundamental problems which might impede useful research on TA. To support this argument, this paper demonstrates that research into TA is an empirical possibility by presenting the preliminary findings of four case studies illustrating the utility of TA research.

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[1] This paper does not debate the technical aspects of throughput accounting (TA); rather its focus is on the dearth of scholarly studies about TA. For a discussion on the technical aspects of TA see for example (Galloway & Waldron, 1988a, 1988b, 1989a, 1989b).

This paper represents a novel contribution by applying the concepts of management fads and fashions to explain the diffusion and adoption of throughput accounting as well as the diffusion of throughput accounting research.

2. Fads, Fashions and the Role of Gurus

> *Do not confuse activity-based costing (ABC) as being an improvement program, such as six sigma or business process engineering. Otherwise, ABC may get classified by employees as a fad, a fashion, or a project-of-the-month.* (Cokins, 2002, p. 3.1)

Cokins' (2002) statement illustrates an archetypal perception of management fads and fashions. Gibson and Tesone (2001) argue that the terms "management fads and management fashions are…often used interchangeably" (p. 122). Whilst it is acknowledged that there are subtle differences between a management fad and a management fashion, for the purpose of this paper the terms fad and fashion will be taken to have the same meaning. So what is a management fad or fashion? Abrahamson (1996) argues that management fashions "must appear both rational (efficient means to important ends) and progressive (new as well as improved relative to older management techniques)" (p. 255) and define them as "relatively transitory collective belief(s) disseminated by management fashion setters, that a management technique leads rational management progress" (p. 257). Carson, Lanier, Carson & Birkenmeier (1999) concur but introduce the notion that fads are "aimed at encouraging better organizational performance" (p. 320). Ten Bos & Heusinkveld (2006) provide a cautionary note and warn that such definitions do not highlight the controversial nature of managerial rationalism whereby managers can sometimes be persuaded to adopt ineffective and sometimes detrimental management techniques .

Whilst management fads/fashions are often deemed to be trivial (Abrahamson, 1996) or lacking enough originality to warrant attention, they can have the potential to be damaging to organisations. At their worst, fads and fashions can "facilitate the diffusion of technically inefficient administrative technologies" (Abrahamson, 1991, p. 588) and/or coerce managers to reject technically efficient technologies. Ten Bos & Heusinkveld (2006) agree and warn of the "anti-managerial aspects of what …can only [be] see[n] as dangerous fads and hypes"(p. 306). Parker & Ritson (2006) temper this argument and believe that the labels 'fashion', 'fad' and 'guru' "undermine the legitimacy and credibility of new developments in management practice" (p. 1336) and note that until fads reach a point where their effectiveness is proven, they "must endure a period where sceptics might dismiss the development as yet one more management fad" (p. 1337). Indeed Nørreklit (2003) argues "it is the duty of the academic world to be sceptical of the diffusion of dubious theories". Despite this scepticism regarding management fads and fashions, the literature does contain studies of innovative and apparently successful accounting techniques that have been classified as fads or fashions. This paper continues by presenting a discussion of these accounting innovations.

The balanced scorecard (BSC) has been adopted by many companies worldwide and has received considerable attention by scholars, despite it being labelled a management fashion (Malmi, 2001; Johnsen, 2001; Nørreklit, 2003; Ax & Bjørnenak, 2005).

Similarly, activity-based costing (ABC) (Malmi, 1999; Cokins, 2002; Carmona & Gutiérrez, 2003), Economic Value Added® (EVA) (Amernic, Losell & Craig, 2000) and the accounting techniques used in the 'new public management' (NPM) model in the public sector (Ball, 2001[2]; Caccia & Steccolini, 2006) were all explored as fads but are still the subject of serious accounting research. To demonstrate this, Abrahamson's (1996) approach to assist with the identification of fads and fashions was applied to ABC, BSC, EVA and NPM. Abrahamson (1996) believes that a fad/fashion will exhibit characteristics of a bell curve as its popularity rises, peaks then falls and argues that a database literature search can be used to demonstrate this phenomenon.

Chart 1: ABC, BSC, EVA & NPM as fads/fashions

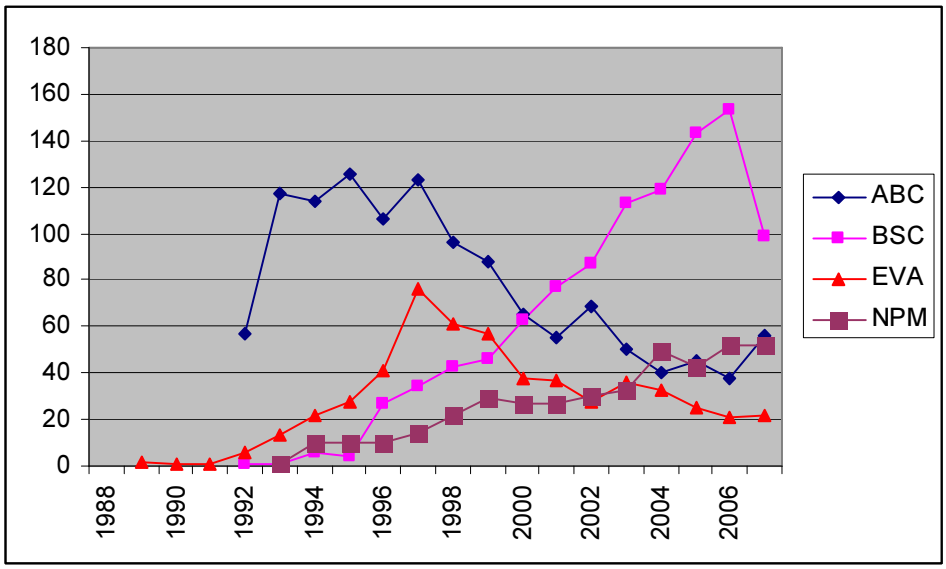

Chart 1 shows that, based on the number of published articles[3], ABC and EVA exhibited a rise in popularity, followed by a decline into a stable state of acceptance showing that it is possible for accounting fads/fashions to gain acceptance as sound techniques. The BSC and NPM both show a steady rise but it is too early to tell if their popularity is waning into acceptance or not. Indeed Abrahamson (1996) argues that the accounting discipline is "open to the swings of fashion" (p. 259) and warns researchers not to assume the potential for theoretical development relates only to aesthetic or trivial technical matters relating to the uptake of fashions, rather the value of such research can provide insight into the "appearance of rationality and progress" (Abrahamson, 1996, p. 259). One such innovation that has received scant attention from accounting scholars is Throughput Accounting (TA). The next section of this paper argues that TA is a management fad/fashion by presenting TA using a management fads and fashions framework and as such warrants inclusion in scholars' research agendas.

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[2] Whilst Ball (2001) stops short of labelling the new public management, in particular benchmarking, as a fad or fashion, references to "rhetoric" and "symbolism" throughout the paper echo characteristics of fads and fashions discussed by Abrahamson (1996) and Kieser (1997).

3 This data was obtained from the ABI inform databse.

3.1 Throughput Accounting as a fad or fashion

To enable the identification of management fads or fashions, Miller and Hartwick (2002) developed a set of characteristics common to management fads and fashions. These characteristics have been employed to assess whether or not TA can be classified as a fad or fashion (see table 1).

Firstly, fads are simple meaning they "are easy to understand and communicate and tend to be framed with labels, buzzwords, lists and acronyms" (Miller & Hartwick, 2002, p. 26). As an example they cite TQM with its "five essential pillars" (p. 26). TOC, the production system supported by TA is a five step process[4] and TA itself has also been described as simple (Noreen et al, 1995; Corbett, 1998) and also contains its own labels such as "throughput", "inventory", "operational expenses", (Goldratt & Fox, 1984; Galloway & Waldron, 1988a, 1988b, 1989a, 1989b; Noreen et al, 1995). Secondly, fads are prescriptive in that they provide actions that must occur in order to solve specific problems. The danger however, arises when their simplicity allows managers to misinterpret the problem or required action. An example of this can be seen in the five steps of TOC. Step two simply says "decide how to exploit the system's constraint". This requires managers to make their own decisions and possibly misinterpret the word "exploit". Miller & Hartwick also believe that fads are falsely encouraging offering promises that are often not delivered and offer limited advice to adopters to evaluate the success or failure following implementation. TA's claim is that it will "identify[y] products that most contribute to the profit picture, thus allowing managers to make good decisions fast" (Corbett, 1998, p. 5). There is little else to guide managers' decisions to be "good", and TA's main thrust is that it must lead to improved performance because existing management accounting techniques are "too complicated" (Corbett, 1998, p. 5) and entrenched in 'cost world thinking'.

The one-size-fits-all nature of fads implies the ability to transpose techniques across all firms in all industries. TA was originally developed for manufacturers, and Noreen et al's (1996) case studies were all manufacturing firms. Some studies have presented TOC implementations in healthcare (Womack & Flowers, 1999; Leshno & Ronen, 2001), and banking (Reid, 2007). Closely aligned to their simplicity is the ability of fads to be incorporated into existing operating procedures. Miller & Hartwick (2002) argue that this cut and paste approach allows partial implementation to occur thereby requiring minimal resources. The case of TA supports this belief. TA can be as simple as three measures: throughput, inventory and expenses, or it can be a relatively complex reporting system integrated with a firm's existing financial reporting system (Noreen et al, 1995; Corbett, 1998).

[4] TOC consists of five steps:

1. Identify the constraint
2. Decide how to exploit the system's constraint
3. Subordinate everything else to the decision in step 2
4. Elevate the system's constraint
5. If the constraint is no longer limiting the system, go back to step 1 (Goldratt, 1984)

Miller & Hartwick (2002) believe that fads are "in tune with the zeitgeist" (p. 27) in that they "resonate with the pressing business problems of the day". Certainly TA attempts to achieve this by resorting to the "relevance lost" debate fostered by Johnson & Kaplan (1987) (Corbett, 1998). Fads are appealing because of their apparent novelty, however this novelty can often be a case of "old wine in new bottles" (Miller & Hartwick, (2002). TA has certainly been accused of closely resembling the traditional management accounting contribution concept whilst TOC's treatment of inventory bears a close resemblance to just-in-time management techniques (Jones & Dugdale, 1998). The dissemination and legitimization of fads is by gurus and their followers (Miller & Hartwick, 2002). The gurus tell stories of firms on the brink of disaster which are saved by a corporate hero by implementing the proposed technique. Such stories are typically anecdotal and lack any empirical evidence. Such is the case of TOC & TA. Eliyahu Goldratt is the guru using his charisma and articulate rhetoric to spread the word of TOC & TA. He achieves this by writing the novel, 'The Goal' which tells of a firm facing closure and hundreds of job losses that is saved by 'Jonah' who trusts the word of an old friend and implements TOC principles, thereby saving the factory and all the workers' jobs. Whilst 'The Goal' lacks any empirical foundation, it has sold over two million copies and is advertised by the publishers as a 'must read' for managers who want to improve profits.

Clearly each characteristic has support from the literature for TA being considered a management fad or fashion. In particular there is strong support for the simplicity of TA as well as TA's novelty and legitimacy. It is therefore concluded that TA can be considered a management fad/fashion.

Table 1.

Characteristic	Explanation	Application to TA
Simple	Easy to understand and communicate with buzzwords and acronyms.	e.g. "throughput", "inventory", "operational expenses", "drum, buffer rope", "bottleneck" (Goldratt, 1984) ; Galloway & Waldron (1988, 1989); Noreen et al (1995);
Prescriptive	Tells managers what to do however misinterpretation can occur.	Goldratt (1984); Corbett (1998)
Falsely encouraging	Promise of outcomes such as effectiveness and performance.	Goldratt (1984); Corbett (1998)
One-size-fits-all	Universal relevance that can apply to almost any industry, organisation or culture.	Goldratt (1984); Noreen et al (1995)
Easy to cut and paste	Can be partially applied, certain fad features can be grafted onto standard operating procedures.	Goldratt (1984); Noreen et al (1995)
In tune with the Zeitgeist	Focus is on current concerns in the business world at the expense of fundamental issues and problems.	Goldratt (1984); Kee (1995); Jones & Dugdale (1998);
Novel, not radical	Often repackaged ideas sold as radical and new.	Galloway & Waldron (1988, 1989); Noreen et al (1995); Atwater & Gagne (1997); Jones & Dugdale (1998); Woodlock (2001)
Legitimised by gurus and disciples	Gain prestige through their proponents rather than empirical evidence.	Goldratt (1984); Corbett (1998); Klapholz & Klarman (2004); ten Bos & Heusinkveld (2007).

Source: adapted from Miller & Hartwick (2002).

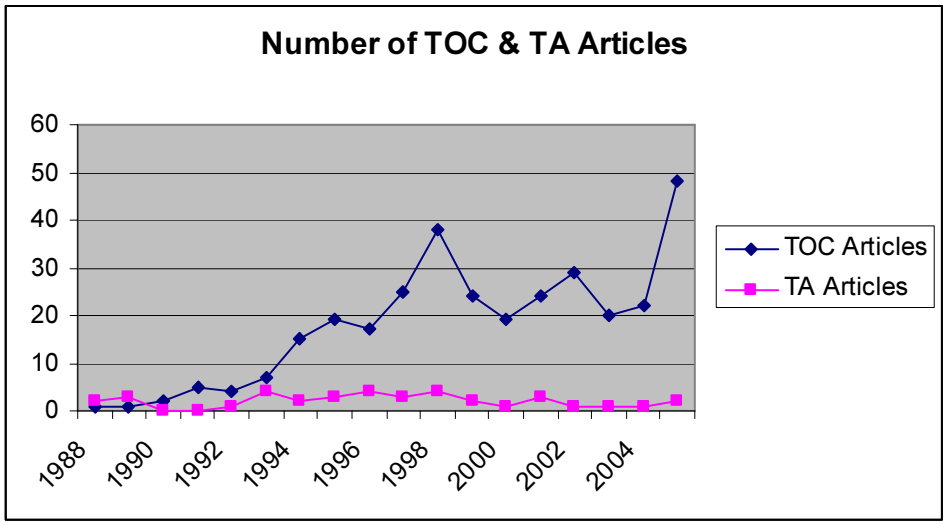
In addition to the characteristics in table 1, some scholars have argued that the duration of a management technique is relevant to its classification as a fad or fashion. Abrahamson (1996) contends that a management fashion "is a relatively transitory collective belief, disseminated by management fashion setters, that a management technique leads rational management progress" (p. 257). Dale, Elkjaer, van der Wiele & Williams (2001) agree with the temporary nature of management fashion, describing both fads and fashions as "temporary phases" (p. 138). However, Gibson and Tesone (2001) propose a differing

view regarding the temporary nature of management fads. They note the promise of improved performance, but they also believe that the differentiating factor between a management fad and a management practice is revealed by the age of the practice – the newer the practice the more likely it is to be a fad. Ryan and Hurley (2004) extend this definition to note that management fads "peak and decline within five years whereas management fashions are more enduring, briefly showing signs of maturity before declining" (p. 42).

It is also possible for a fashion that has declined to remerge, sometimes several times. To support this, Abrahamson (1996) cites the example of employee-stock-ownership programmes which gained fashion status three times during the 20th century. To demonstrate, he conducted a literature search to explain the lifecycle of quality circles, a popular fad/fashion from the 1980s. This paper applies the same approach to TOC and TA.

Using the search strings "Theory of Constraints" and "throughput accounting" in the ABI Inform/Proquest database, chart 2 reveals not only the enduring nature of TOC but also the increased interest in TOC. The results suggest interest in TOC is rising and has yet to reach its peak. The enduring nature of TA is evident; however, the number of articles appears to be consistent showing neither an increase nor a decline in interest. This would tend to suggest that TA is not a fad/fashion; yet it is embedded in TOC and this fact warrants its inclusion in this discussion.

Chart 2: Number of TOC and TA Articles



The role of gurus in disseminating fads/fashions and persuading firms to adopt a particular fad/fashion has received attention from scholars (Jones & Dugdale, 2002; Nørreklit, 2003; Parker & Ritson, 2006; ten Bos & Heusinkveld, 2006). Wren (1973, cited in Ten Bos & Heusinkveld, 2006) believes fashions should not be condemned or dismissed because of personal feelings towards the guru advocating the fashion. This echoes the Shakespearean saying "Don't shoot the messenger". Parker & Ritson (2006) note the role of rhetoric and public performances in stereotyping gurus and warn of the

influences such stereotypes can have on managers to either adopt harmful fashions or ignore those with potential to assist management.

To summarise so far, this section has argued that TA can be called a fad/fashion. As such TA must not be dismissed by researchers because of preconceived notions regarding the perceived value or academic merits of fads/fashions. Abrahamson (1996) urges academics to research fads and fashions to "explain when and how they fail to serve stakeholders, employees, managers, students, and other stakeholders, but also to intervene in the dissemination and adoption process in order to render it a more technically useful, collective learning process for stakeholders" (1996, p. 254). If this is the case then why has there been a lack of interest in TA research by accounting researchers? The next section poses some likely reasons for the lack of interest in TA from accounting academics. The research agendas of scholars are examined by returning to Abrahamson's (1991, 1996) fads and fashions framework.

3. Fads & Fashions in Research

> *The much lamented 'relevance gap' is as much a product of practitioners wedded to gurus and fads as it is of academics wedded to abstractions and fundamentals.* (Weick, 2002, p. S71).

Ignoring the gap between theory and practice, hereafter referred to as the relevance gap, can mean scholars run the risk of losing their credibility as theorists (Dean & Bowen, 1994, cited in Abrahamson, 1996). This section presents the extent to which researchers are influenced by fads and fashions in research agendas as well as the existence of research leaders or, as ten Bos & Heusinkveld (2006) call them, academic gurus.

Carmona & Guitierrez (2003) argue that some research agendas may follow characteristics of management fashions in the way they emerge and sustain interest. In addition they note that such research agendas are often transitory in nature and "suddenly and dramatically create an area of interest" (p. 214), in much the same way management fads and fashions emerge. Furthermore, Carmona & Gutierrez (2003) believe that research vogues are starkly different from "the elegant, academic research that presently constitutes the canon of the discipline", (p. 214). One reason to explain the apparent academic resistance to the inclusion of TA into a research agenda could relate to the rating of academics and their research.

Many academic researchers are subject to regular research assessment exercises (RAE) such as the RAE in the UK & Spain, the proposed excellence for research in Australia (ERA) and the performance based research fund (PBRF) in New Zealand. Such RAEs may inhibit the ability of individual researchers to conduct research into new and emerging areas of interest, as institutions (and the individual researchers within them) have research profiles which can inhibit the adoption of research fashions (Carmona & Gutierrez, 2003). This occurs because institutions with high research profiles tend to adopt long-term research agendas which have little room to include new research areas

(Carmona & Gutierrez, 2003). Choudhury (1986) also notes the lack of innovative research amongst the academic community. The tendency for academics to become "enmeshed in minute incrementalism whereby they concern themselves with extending a previous treatise by varying a single parameter or relaxing a single assumption" (p. 28) does not result in research that is relevant to the business community. It is interesting to note however that those institutions with high research profiles are more likely to be early adopters of research fashions when compared to their low research profile counterparts (Carmona & Gutierrez, 2003).

Adopting a new area of research interest carries risk. Possible negative notions by accounting researchers about TA could imply it is perceived as too risky to be the subject of scholarly research. As academic research is arguably driven by published outputs, the number one risk is that the research will either not be published or, it may only be publishable in journals with a limited circulation or be lacking in perceived quality. Choudhury (1986) is rather scathing towards the editorial policies of major accounting journals, arguing that innovative accounting research is considered for publication not on its practical relevance or merit, rather on the "size of [the journal's] readership in the practitioner community indicating its interest in the content", (p. 29). On the other hand, research success, as measured by publications, can have an extremely high pay-off, as researchers who publish innovative studies are often perceived as leaders in their field (Carmona & Gutierrez, 2003). Furthermore, Choudhury (1986) notes that "academics are concerned with acceptance and accolade within the research community" (p. 23). Relating this to the work of Abrahamson (1996), researchers who conduct and publish novel studies could be considered 'research gurus'.

Another possible explanation for the lack of research interest in TA results from the evolution of management accounting literature. Choudhury (1986) notes the tendency for academics to pursue multi-disciplinary research at the expense of practical research within a particular area. One possible reason for this phenomenon could be the resources available to researchers and the networks within which they participate. Nørreklit (2003) believes that theoretical truth and its antithesis theoretical falsehood are directly dependent "on the institutional network and resources of the researchers" (3002, p. 596). Latour (1987) also highlights the importance of an institutional network for researchers and believes that researchers who operate outside such a network risk alienation from their peers. He also notes the vastly increased effort that must be expended by researchers when developing new research agendas and theories. Their research must use more resources, and have stronger data and use more robust methods than for currently accepted research areas within their institutional network. Nørreklit (2003) refers to this concept as the *ethos appeal,* i.e. research will appeal to users as a result of the trust they hold in the researcher and institution. Nørreklit (2003) notes that research that has been conducted within institutional networks may not always be trustworthy or objective.

Abrahamson (1996) offers another reason for the lack of trust in scholarly research. He believes that a time lag between the emergence of a fad/fashion and its attention from scholars is an issue and warns "such a lag may reflect attempts by management scholars to directly influence management practitioners by using their rhetoric" (p. 269). These

contentions should not be ignored as Beyer (1992) warns an "occasional trickle of concepts [from management scholars to practitioners] hardly seems a sufficient rationale to sustain the social legitimacy and financial support of all of the faculty, Ph.D. programs and research projects in our field" (p. 471, cited in Abrahamson, 1996, p. 270).

Whilst Weick (2002) suggests that academics are not affected by fads, fashions or gurus, some scholars suggest that academics themselves can become gurus and create and disseminate fads/fashions (Huczynski, 1993). Accounting is no exception to this observation. ABC was created and developed by two Harvard academics, Robin Cooper and Bob Kaplan. Their status as highly respected academics from one of the world's leading institutions certainly gives them a high ethos appeal. The Balanced Scorecard is a similar example. Bob Kaplan and David Norton developed the Balanced Scorecard over 15 years ago whilst Bob Kaplan was a Harvard academic and David Norton, a highly respected consultant. Economic Value Added (EVA) introduced by Joel Stern and G Bennett Stewart III is yet another example. Joel Stern is currently Adjunct Professor of Finance at the Chicago Graduate School of Business whilst G Bennett Stewart III serves on the editorial board of the *Journal of Corporate Finance* as executive editor. As previously noted, ABC, the Balanced Scorecard and EVA have all been labelled fads or fashions at some point yet they have appeared to shed the mantle of scepticism and proved to be the subject of scholarly research agendas.

Towill (2006) offers another dimension to the debate. He notes that "fashions firstly appear in the popular press before they appear in the academic press" (p. 319). This view supports the dissemination of the accounting innovations presented above. The Balanced Scorecard first appeared in the *Harvard Business* Review, a non-peer reviewed journal whilst ABC and EVA emerged in books. Could it be that accounting researchers are sceptical to the extent that they dismiss any fad or fashion that does not have the support of an 'accounting academic' guru? Or could it be the environment at the time the fad or fashion was developed?

This section has presented possible reasons for the lack of attention extended to TA by accounting scholars. It has argued that research is subject to a level of trust. In addition it is proposed that scholars prefer research agendas that carry as little risk as possible and that are in tune with their research networks. One contributing factor to this is arguably the assessment of research by scholars themselves (i.e. the ethos appeal) and by governments assessing scholars. The next section presents the findings from four case studies of the management control systems of firms that have implemented TOC, to demonstrate that TOC does necessitate changes to management control systems and these changes do warrant inclusion in a scholarly research agenda.

5. Research Findings

Case studies were undertaken in four single-site, privately owned companies. Engineering Ltd[5]. specializes in medium to heavy engineering and fabrication, Food Products Ltd produced fruit preserves and juices, Furniture Ltd manufactures wooden,

[5] The real names of the firms have been changed to protect confidentiality.

upholstered furniture mainly for the hospitality industry whilst Refrigeration Ltd makes refrigeration and heating equipment for the hospitality and catering industries. All firms were involved in exporting as well as supplying the local market and all firms used TOC as their production scheduling system. Three of the firms employed less than two hundred employees, with one employing in excess of three hundred employees. These firms are similar in size and other attributes as those reported in Noreen et al (1995).

Given the similarities in organizational form, it is likely that private ownership is an important factor in a firm's decision to adopt TOC. In addition, firm size could also be a contributing factor. Noreen et al (1995) observed that the firms they visited all had less than two hundred employees. Three of the four sites in this study employed less than two hundred employees. In addition it was noted by the largest firm, that they believed they were at the extreme end of the scale in terms of company size and product complexity to be able to implement TOC effectively.

TOC Implementation

The TOC systems at the four case study sites had been operating for between two and four years. All four firms had TOC systems that were extremely similar as they were implemented by the same consulting company. This could partly explain the similarity between the systems at an operational level. The key similarity observed at all firms was the use of TOC boards, located at the constraint, to manage production (see Illustration 1).

The TOC board shows all of the work to be completed and each job's current stage in the production cycle. There are four zones on the TOC board – zones three, two, one and zero. As a job enters the department, the job sheet[6] is placed in zone three and progresses along the TOC board, through the zones in the direction shown by the arrows until such time as the job is completed and the job sheet is removed from the board. It is at this point that the throughput dollars associated with a job are included in the daily throughput total for the department, and thus, workers are aware of the contribution to throughput being made upon completion of each job. Four times each day[7] the TOC board is updated by moving each job along one space on the TOC board. There is a target level of throughput dollars at the constraint to meet each day and workers are expected to manage their departmental contribution.

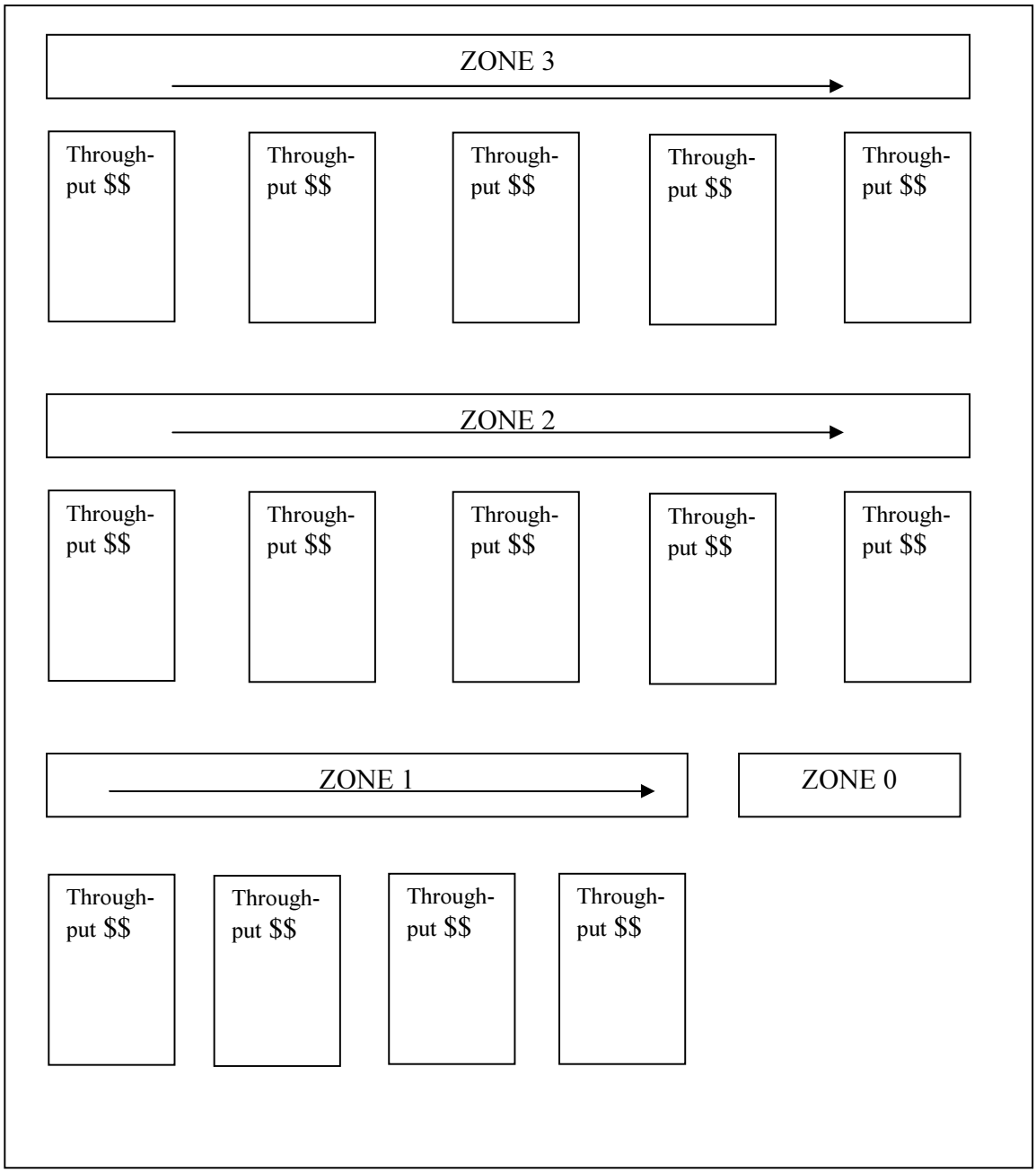
Zone zero is where jobs that have not been completed within two and a half days are placed. A job sheet entering zone zero indicates a backlog in production. When this occurs, all departments except for the constraint cease operating and wait until the job is completed at the constraint. Once the job in zone zero is completed and has left the

[6] A job sheet contains all the relevant information pertaining to a job such as the quantity of units to be produced, materials required, time required in the constraint and the throughput dollars associated with the job (Throughput dollars is calculated by deducting the cost of raw materials from the sales price of the item).

[7] The duration between updating the TOC board varies. If a department runs for eight hours per day, the TOC board is updated every 2 hours, if a department runs for 12 hours per day, the TOC board is updated every 3 hours and so on.

constraint, the other departments then resume production. This was acknowledged as a sub-optimal situation for each company, as it results in employees being paid not to work. Therefore it is not common, but it was acknowledged that it had happened in each firm at least once.

Illustration 1. TOC Board at Company A



All sites acknowledged that they had one constraint. One company's constraint was experienced multi-skilled labour and this firm was the exception in that they used TOC boards in every production department. It was explained that planning their flexible use of multi-skilled labour was assisted by reviewing all TOC boards everyday. In

summary, the TOC boards convey important financial information to operational staff. In particular the TOC boards communicate the throughput dollars attached to each job that was completed. All firms had a targeted level of daily throughput that was communicated to, and monitored by, production staff. This demonstrates that the use of TOC boards is a valuable communication tool by which management convey accounting information and communicate financial targets to operational staff.

Throughput Accounting

None of the firms had implemented a throughput accounting system, however, they all exhibited elements of throughput accounting from the literature. There were two predominant reasons given for not implementing a throughput accounting system. Firstly, all firms believed that throughput accounting was too expensive to implement and maintain, and the additional costs of throughput accounting would exceed any benefits. Secondly, three firms noted that their current financial reporting needs were met by their current accounting system. These firms believed that producing throughput accounting reports would not negate the need for traditional accounting reports, particularly to satisfy regulatory reporting requirements. As a result, they were reluctant to enter into a situation where they would be producing double the number of financial reports that they currently produce. In addition, it was noted that traditional financial reports, in conjunction with the throughput information collected from the factory, were deemed adequate to financially manage the firms on a day to day basis. Doubts were also expressed over the understandibility of throughput accounting reports and the additional requirement to explain the measures and numbers in throughput accounting reports.

One firm, Food Products Ltd[8], did use throughput measures in its financial reports; however the firm contends that it does not use throughput accounting. Their throughput reports bear strong similarities to the suggestions for throughput reporting contained in Caspari & Caspari (2004). The decision to produce throughput financial reports was driven by the change in thinking and decision making required when a TOC system is implemented. As all operational decisions are made using throughput, management believed it was a natural progression to include throughput on their financial reports. This supports Jones & Dugdale's (1998) observation that firms that had undergone a paradigm shift in organisational thinking would provide accounting research opportunities.

Since none of the firms stated that they use throughput accounting, most use traditional financial reports produced by their existing accounting systems to manage financial performance. Food Products Ltd however, does include throughput in their traditional reports with a note to the financial statements reconciling the throughput accounts to GAAP accounts. All firms use TOC exclusively to manage and monitor production, therefore it is unlikely that the breadth of TOC implementation is a driving factor to adopt throughput accounting. Food Products Ltd uses throughput in its financial reports. The

[8] The real names of the case study firms have been changed to protect confidentiality. Throughout this paper the firms will be referred to as: Engineering Ltd, Furniture Ltd, Food Products Ltd and Refrigeration Ltd

reason given for this was to support the philosophy and thought processes required when using a TOC system. It is therefore suggested that the depth of TOC adoption is a driving factor for the use of throughput reports.

Product Costing

There was a range of costing techniques evident at the TOC firms. Two firms used standard costing, one firm used activity-based costing as well as market pricing for its exported products, and one firm was subject to market driven pricing. Of note was the fact that none of the firms included manufacturing overhead when calculating product costs. There were various reasons for this including; the length of the manufacturing cycle, the desire to manage overhead and not treat it as a recoverable cost from the customer and the arbitrary nature of overhead allocation methods.

As an alternative to allocating manufacturing overhead to products, Engineering Ltd allocated an overhead cost to products based on the time that was spent in the constraint. The reason for this was to highlight the importance of the constraint to production management by making them aware of and responsible for the cost of the constraint. This overhead allocation was not used for product costing however, as Engineering Ltd use market pricing for all of their products. Instead the cost allocations are used by management to manage costs and time spent in the constraint.

Following the implementation of TOC, Food Products Ltd changed their standard costing system by eliminating manufacturing overhead from the product cost. Manufacturing overhead was replaced with an assignment of direct selling costs to product costs. The effect of this means the product costs and inventory valuations shown in Food Products Ltd's financial reports is a variable cost rather than the absorption cost required by accounting standards[9].

Given the common lack of manufacturing overhead for calculating product costs it is therefore suggested that firms who use TOC will not allocate manufacturing overhead to products for costing purposes. In addition it is also surmised that manufacturing overhead will be measured and controlled at a higher level and in less detail than firms without TOC.

Budgeting and Cost Control

The budgeting systems used by the TOC firms were not prepared or monitored using throughput. All firms use an annual budget process that remains unchanged following the implementation of TOC, however some companies used the budget information in a different manner. Food Products Ltd uses the same budget process it has always used, however the budget information is used differently following the implementation of TOC. Prior to TOC implementation, all overhead budgets were managed by production managers. This capability has now been devolved to operational staff that monitor and manage overhead costs on a daily basis. In addition, more emphasis is now placed on

[9] Recall that Food Products Ltd provides a reconciliation of throughput accounts to GAAP accounts in the notes to the financial statements.

variance analysis. Recall that Engineering Ltd uses a labour ratio as the primary recovery method for overheads. Frequent variance analysis of labour cost and usage assists in identifying potential modifications to the labour ratio and as a result overhead recovery is improved following TOC implementation.

Food Products Ltd uses zero-based budgeting. The cost and resources required to undertake this type of budgeting were acknowledged, but due to the unique seasonal nature of their raw materials (raw fruit) it was strongly believed that zero-based budgeting provided the most accurate and relevant method of cost control. Throughput was not included in the budgeting process, however it did flow through to the monthly expense reports which were compared against budget to evaluate performance.

Three firms, Furniture Ltd, Food Products Ltd and Refrigeration Ltd, measure and monitor quality costs on a regular basis. Following the implementation of TOC it was highlighted that the use of the constraint was compromised by rework. This was not realised prior to TOC. Whilst the three firms noted that they had always measured and monitored quality costs, the implementation of TOC made them realise that poor quality had a very real impact on throughput and therefore profit.

Given the case study evidence it is surmised that firms with TOC will undertake an annual budgeting process. There is a paucity of literature regarding TOC and the use of budgets. It is possible however, to expand the work of Goldratt (1992) to include budgets and budgeting when referring to management accounting in general. If this is the case, then it would be expected that firms with TOC would not undertake a budgeting process and they would not place emphasis on budgets. This was not observed at any of the case study sites. Rather the budgeting process was strongly entrenched at all sites and all indications were that this would continue to be the case in the foreseeable future.

The structure of the budget will predominantly be determined by the costing system in place and the needs of the individual firm. In addition, the evidence suggests that firms with TOC will measure and monitor quality measures more so than firms without TOC. This is because of the emphasis placed on capacity at the constraint and recognises the additional strain placed on the constraint by poor quality and rework.

Performance Evaluation

All firms evaluate the performance however there are differences between firms. Refrigeration Ltd noted the contradiction between their current performance evaluation and TOC. Performance was evaluated by sales for their sales personnel. Sales however did not necessarily result in optimal throughput. Following the implementation of TOC, Refrigeration Ltd have proposed a new method of evaluating sales staff which will be driven by throughput. It was hoped that this would solve the throughput disparity between sales and production.

Production staff and departments are evaluated on productivity. To overcome the potential problems in measuring productivity in the different departments, all production was measured by a common unit. When used in conjunction with throughput measures, this system worked well and there were no intentions to change it.

Engineering Ltd does include TOC when evaluating performance. The labour ratio is evaluated to determine firm performance. This is a new innovation following the implementation of TOC. Departmental performance is not measured and is therefore not evaluated. Managers are not evaluated on financial performance. Instead qualitative measures are used such as employee satisfaction, attainment of delivery deadlines etc.

In addition, Engineering Ltd was the only firm to measure customer profitability. It was noted that this was a relatively simple exercise as each customer placed unique orders which could easily be traced and measured for profitability. Surprisingly, customer profitability was only measured, it was not managed. The firm believes that any profit is good profit and it was noted that managing customers based on profit would not contribute significantly to profit. Rather the opposite could happen as refusing orders, or increasing pricing to certain customers would only erode their customer base. This was not something that Engineering Ltd wished to do as the market in which they operate was highly competitive.

Like Refrigeration Ltd, Food Products Ltd acknowledges the disparity between evaluating sales performance against sales targets and production against throughput. Food Products Ltd also has a desire to measure sales targets using throughput, however it was noted that their current financial accounting system was inadequate for this process. There have been changes to performance evaluation at Food Products Ltd following the implementation of TOC. Departmental managers must now be accountable for throughput dollar targets and throughput by product line. Prior to the implementation of TOC departmental managers were responsible for managing expenses in accordance with the budget. Food Products Ltd does however use throughput as a performance measure at the firm level.

The case study evidence suggests that firms with TOC will measure and evaluate performance. The unit of measurement will vary from the firm as a whole down to individuals and will depend on the information needs of the individual firm. Two firms use TOC measures to evaluate firm performance and two firms note the inadequacy of their current performance evaluation system when used with TOC. It is therefore expected that firms with TOC with use TOC measures to evaluate firm performance. In addition, firms with TOC will struggle with the disparity between traditional measures of performance based on sales and managing throughput. To overcome this it is expected that TOC firms will either measure sales using throughput or consider measuring sales based on throughput.

Capital Budgeting

All four firms had a formal capital budgeting process. Every request for expenditure must meet certain criteria such as Net Present Value (NPV) or Pay back. At all firms the capital budgeting process had been in place prior to the implementation of TOC. Following the implementation of TOC however all firms altered their capital budgeting processes to include the impact on the constraint. Each capital budgeting proposal had to demonstrate how the particular project would free up the constraint and therefore impact on throughput dollars. It was the common belief amongst middle management, at all

firms, that a capital project request that did not impact the constraint positively would be declined, despite other positive attributes such as NPV etc.

Given the five steps of constraint management[10] this is not surprising. Step three of constraint management is to subordinate all managerial actions and decisions in an effort to alleviate the constraint. It is therefore logical to assume that firms with TOC will include TOC information in the capital budgeting process and capital budgeting decisions will have constraint alleviation as a major factor.

TOC implementation caused changes to the management control systems at all case study sites, despite assertions that TA was not implemented. All firms used accounting information on the factory floor as the primary method of communicating production scheduling and employees used this accounting information to manage their work flows. Whilst none of the firms stated that they used TA, their understanding of TA was as a separate accounting system that could be purchased and implemented. Despite this, several changes to the firms' existing accounting systems were observed. One firm produced complete financial statements including throughput in both the income statement and the balance sheet. All firms omitted overhead when calculating and/or managing product costs, however one firm did use a throughput measure, the time spent in the constraint, as a proxy for overhead to draw attention to the constraint, rather than to cost products. Budgeting was conducted annually in all firms and throughput received varying degrees emphasis in the budget. One firm had used throughput measures contained in the budget to devolve budget responsibility from management down to operational staff as well as increasing the frequency of budget monitoring following the implementation of TOC. In addition, three firms placed greater importance on quality costs as a result of TOC implementation by measuring managing rework, in particular, due to the burden placed on the constraint by poor quality. Performance evaluation differed at all firms with two firms planning to include throughput as an evaluation tool for sales personnel due to its strong linkage with production and another firm setting throughput measures and targets for all departmental managers. Lastly all firms had altered their capital budgeting proposals to include consideration of the financial and non-financial impact on the constraint.

These cases have demonstrated that there is a utility for accounting researchers to conduct research into TA systems. The final section of this paper present some challenges to accounting researchers and highlights areas where these challenges could be met.

[10] Recall that TOC consists of five steps:

1. Identify the constraint
2. Decide how to exploit the system's constraint
3. Subordinate everything else to the decision in step 2
4. Elevate the system's constraint
5. If the constraint is no longer limiting the system, go back to step 1 (Goldratt, 1984)

6. Concluding thoughts and research challenges

Jones & Dugdale (1998) highlighted the potential for researchers to include TA into their research agendas. Why is it then that TA has essentially been ignored by accounting researchers? Are accounting academics too sceptical of innovative practises? Research networks exist and scholars who choose to participate in these networks must obey the norms of those networks or risk alienation. Are accounting scholars not prepared to operate on the periphery or even outside these networks? Or are accounting scholars reluctant to lay down the foundation for new networks? Resources play a critical part in scholarly processes. Does the pressure placed on academics by governmental research assessment exercises around the world influence a scholar's research agenda by making "safe" choices preferable?

There still exists a utility to produce theoretically sound research into TA. Nørreklit (2003) calls for examinations of management guru texts for sound argumentation. Any of the prolific writings of Goldratt could be analysed in a similar way to Nørreklit's analysis of *The Balanced Scorecard* (1996) "to allow identification of good as well as problematic rhetoric as part of a learning process which may offer directions for the development of theories and models" (p. 615).

The four case studies in this paper highlighted many changes to management control systems following the implementation of TOC. Research identifying the change process as well as the causal factors for management control system change would add to the body of knowledge and partly satisfy Otley's (2008) advice to "not assume systems are set in concrete - they are usually in the process of being changed" (p. 238). Langfield-Smith's (1998) challenge to conduct management accounting research that considers "the nature of contemporary management accounting work and management accounting information that is used within organizations" (p. 224) could be taken up by scholars using a TOC setting and focusing on the informative value of TA. Furthermore Langfield-Smith (1998) believes that "understanding how management accounting practices come to the attention of organizational actors and how they are implemented and developed will continue to be a source of interesting research" (p. 224). This contention could be satisfied in a TA context by the use of innovative research methodologies such as Latour's actor-network theory to understand and explain the change processes involved. An approach such as this would also serve Otley's (2008) call to "keep studying real organizations; practice leads theory in this area" (p. 238).

This paper has argued for the inclusion of TA as a management fad/fashion as well as providing evidence of the utility of TA research. Whether research into TA poses a risk to scholars or not; or even if it is deemed trivial through researchers' interpretations of TA as a fad or fashion, a case has been put forward for the inclusion of TA in scholarly agendas. The challenge to accounting researchers is to take up this call and conduct theoretically sound research to develop TA and provide useful commentary in the academic and professional arenas.

7. References

ABI Inform Global, Proquest, Ann arbour, Mi.

Abrahamson, E., (1991), "Managerial fads and fashions: the diffusion and rejection of innovations", *The Academy of Management Review,* 16(3), pp. 586-612.

Abrahamson, E., (1996), "Management Fashion", *The Academy of Management Review*, 21, 1, pp. 254-285.

Amernic, J.H., Losell, D.L., Craig, R.J., "Economic value added as ideology through a critical lens: towards a pedagogy for management fashion?, *Accounting Education*, 9, (4), pp. 343-367.

Atwater, B., & Gagne, M. (1997), "The Theory of Constraints versus Contribution Margin Analysis for Product Mix Decisions", *Journal of Cost Management*, January/February, pp. 6-15.

Ax, C., & Bjørnenak, T., (2005), "Bundling and diffusion of management accounting innovations – the case of the balanced scorecard in Sweden", *Management Accounting Research*, 16, pp. 1-20.

Ball, A., (2001), "Discovering its own relevance? Reflections on the 'new' management accounting in the public sector", *Accounting Forum,* **25,** (3), pp. 283-299.

Boyd, L.H., & Cox, J.F., (2002), "Optimal decision making using cost accounting information", *International Journal of Production Research,* **40**, (8), pp. 1879-1898.

Caccia, L., & Steccolini, I., (2006), "Accounting change in Italian local governments: What's beyond management fashion?", *Critical Perspectives on Accounting*, 17, pp. 154-175.

Carmona, S., & Gutiérrez, I., (2003), "Vogues in management accounting research", *Scandinavian Journal of Management*, 19, pp. 213-231.

Carson, P.P., Lanier, P.A., Carson, K.D., & Birkenmeier, B.J., (1999), "A historical perspective on fad adoption and abandonment", *Journal of Management History*, 5(6), pp. 320-333.

Caspari, J.A., & Caspari, P. (2004), *Management dynamics: merging constraints accounting to drive improvement,* Hoboken N.J., John Wiley & Sons

Choudhury, N., (1986), "In Search of Relevance in Management Accounting Research", *Accounting and Business Research*, Winter, pp. 21-32.

Cokins, G., (2002), "Activity based costing: Optional or required?", *AACE International Transactions*, pp. RI31-RI36.

Cooper, R., and Slagmulder, R., (1998), Operational improvement and strategic costing, *Management Accounting*, 80, 3, p. p12-13

Corbett, T., (1998), *Throughput Accounting*, North River Press, Great Barrington, Ma., 174pp.

Corbett, T., (2006), Three-questions accounting*, Strategic Finance*, 87, 10, pp. 48-55.

Dale, B.G., Elkjaer, M.B.F., van der Wiele, A., & Williams, A.R.T., (2001), "Fad, fashion and fit: An examination of quality circles, business process re-engineering and statistical process control", *International Journal of Production Economics,* 73, pp. 137-152.

Dugdale, D., and Jones, T.C., (1998), Throughput Accounting: Transforming practices? *British Accounting Review*, 30, pp. 203-220.

Dugdale, D., Jones, T.C. & Green, S. (2006) *Contemporary Management Accounting Practices in UK Manufacturing,* London, Elsevier/CIMA.

Emmanuel, C.R. & Edwards, K., (1990) "Exploring the relevance gap", *Management Accounting*, 68, 10, pp. 44-46.

Flamholtz, E.G., (1992), "Relevance regained: Management accounting – Past, present, and future", *Advances in Management Accounting*, 1, p. 21.

Galloway, D. & Waldron, D. (1988a), `Throughput Accounting - 1: The need for a new language for manufacturing', *Management Accounting*, November pp 34-35.

Galloway, D. & Waldron, D. (1988b), `Throughput Accounting - 2: Ranking products profitably', *Management Accounting*, December pp 34-35.

Galloway, D. & Waldron, D. (1989a), `Throughput Accounting - 3: A better way to control labour costs', *Management Accounting*, January pp 32-33.

Galloway, D. & Waldron, D. (1989b), `Throughput Accounting - 4: Moving on to complex products', *Management Accounting*, February pp 40-41.

Gibson, J.W., & Tesone, D.V., (2001), "Managament fads: Emergence, evolution and implications for managers", *The Academy of Management Executive*, 15(4), pp. 122-133.

Goldratt, E., & Fox, R., (1984), *The Goal*, North River Press, Croton-on-Hudson, NY.

Goldratt, E., (1992), "Late Night Discussions: XII: How Cost Accounting can get in the Way*", Industry Week*, June 1. pp. 38-40

Gupta, M., (2001), "Activity-based throughput management in a manufacturing company", *International Journal of Production Research,* **39**, (6), pp. 1163-1182.

Gupta, M.C., Baxendale, S.J., & Raju, P.S., (2002), "Integrating ABM/TOC approached for performance improvement:a framewoek and application", *International Journal of Production Research,* **40**, (14), pp. 3225-3251.

Himola, O. (2001), Theory of Constraints and Outsourcing Decisions, *International Journal of Manufacturing Technology and Management*, 3, 6, p. 517.

Himola, O. (2005), Product mix decisions and production lot sizes, *International Journal of Manufacturing Technology and Management*, 7, 1, p. 41.

Huczynski, A., (1993), *Management gurus: what makes them and how to become one*, London: Routledge.

Johnsen, A., (2001), "Balanced scorecard: theoretical perspectives and public management implications", *Managerial Auditing Journal*, 16, 6, pp. 310-330.

Johnson, H.T., (1992), *Relevance Regained: from top-down control to bottom-up empowerment,* New York, NY., The Free Press.

Johnson, H.T., and Kaplan, R.S., (1987), *Relevance Lost: The rise and fall of management accounting* 2e, Boston, Harvard Business School Press

Jones, T.C., and Dugdale, D., (1998a), Theory of Constraints: Transforming ideas? *British Accounting Review*, 30, pp. 73-91.

Jones, T.C., and Dugdale, D., (2002), The ABC bandwagon and the juggernaut of modernity, *Accounting, Organizations and Society*, 27, pp. 121-163.

Kee, R., (1995), "Integrating activity-based costing with the theory of constraints to enhance production-related decision-making", A*ccounting Horizons*, 9(4), pp. 48-62.

Kieser, A., (1997), "Rhetoric and myth in management fashion". *Organisation* **4** 1, pp. 49–74.

Kirche, E.T., Kadipasaoglu, S.N., & Khumawala, B.M., (2005), "Maximizing supply chain profits with effective order management: Integration of Activity-based costing and theory of constraints with mixed-integer modelling", *International Journal of Production Research,* **43**, (7), pp. 1297-1311.

Langfield-Smith, K., (2008), "Strategic management accounting: how far have we come in 25 years?", *Accounting, Auditing and Accountability Journal*, 21(2), pp.204-228.

Latour, B., (1987), *Science in action – How to follow scientists and engineers through society,* Cambridge, Massachusetts: Harvard University Press.

Latour, B., (2005), *Reassembling the social: An introduction to Actor-Network Theory*, Oxford: Oxford University Press.

Lea, B., & Min, H., (2003), "Selection of management accounting systems in just-in-time and theory of constraints-based manufacturing", *International Journal of Production Research,* **41**, (13), pp. 2879-2910.

Leshno, M., Ronen, B., (2001), "The complete kit concept – implementation in the health care system", *Homan systems management*, 20, pp. 313-318.

Lockamy, A., & Spencer, M.S., (1998), "Performance measurement in a theory of constraints environment", *International Journal of Production Research*, **36**, (8), pp. 2045-2060.

Long, A.J., Castellano, J.F., & Roehm, H.A. (2002), A user friendly financial reporting system, *Quality Progress*, 35, 1, pp. 60-65.

Lowry, J., (1993), "Management Accounting's Diminishing Post-Industrial Relevance: Johnson and Kaplan Revisited", *Accounting and Business Research*, Spring, pp. 169-180.

Macintosh, N.B., (1994), "Management accounting's dark side: Part 1", *CA Magazine*, 127, 7, pp. 40-45.

Malmi, T., & Granlund, M., (2006) "In search of management accounting theory", Paper presented at *Accounting and Finance Association of Australia and New Zealand 2006 Annual Conference*, Wellington, 2-4 July.

Malmi, T., (1999), "Activity-based costing diffusion across organizations: An exploratory empirical analysis of Finnish firms", *Accounting, Organizations and Society*, 24, (8), pp. 649-672.

Malmi, T., (2001), "Balanced scorecards in Finnish companies: A Research note", *Management Accounting Research*, 12, pp. 207-220.

Miller, D., & Hartwick, J., (2002), "Spotting management fads", *Harvard Business Review*, 80, 10, p. 26.

Nikias, A.D., Schwartz, S.T. and Young, R.A., (2005), A note on the roles of aggregation and delay in management control, *Issues in Accounting Education*, 20, 3, pp. 273-284.

Noreen, E., Smith, D. and Mackey, J.T., (1995), *The theory of constraints and its implications for management accounting,* New York, New River Press.

Nørreklit, H., (2003), "The Balanced Scorecard: what is the score? A rhetorical analysis of the Balanced Scorecard", *Accounting Organizations and Society*, 28, pp. 591-619.

Otley, D., (2008), "Did Kaplan and Johnson get it right?", *Accounting, Auditing and Accountability Journal,* 21, 2, p. 229-239.

Otley, D., (2008), "Did Kaplan and Johnson get it right?", *Accounting, Auditing and Accountability Journal,* 21(2), pp. 229-239

Parker, L.D., & Ritson, P., (2005), "Fads, stereotypes and management gurus: Fayol and Follett today", *Management Decision*, 43, 10, pp. 1335-1357.

Reid, R.A., (2007), "applying the TOC five-step focusing system in the service sector: A banking subsystem", *Managing Service Quality*, 17(2), pp. 209-234.

Roslender, R., (1995), "Accounting for strategic positioning: Responding to the crisis in management accounting", *British Journal of Management*, 6, pp. 45-57.

Ryan, S., & Hurley, J., (2004), "Have total quality management, business process re-engineering and the learning organisation been replaced by knowledge management?", *Irish Journal of Management*, 25, 1, pp. 41-55.

Scapens, R., (1988), "Research into management accounting practice", *Management Accounting*, 66, 11, pp. 26-28.

Shank, J.K., (1989), "Strategic Cost Management: New Wine, or Just New Bottles?" *Journal of Management Accounting Research*, 1, Fall, pp. 45-65.

Souren, R., Ahn, H., & Schmitz, C. (2005), "Optimal product mix decisions based on the theory of constraint? Exposing rarely emphasized premises of throughput accounting", *International Journal of Production Research*, 43, 2, p. 361.

Ten Bos, R., & Heusinkveld, S., (2006), "The guru's gusto: management fashion, performance and taste, *Journal of Organizational Change Management*, 20(3), pp. 304-325

Towill, D.R., (2006), "Fadotomy – anatomy of the transformation of a fad in a management paradigm", *Journal of Management History*, 12(3), pp. 319-338.

Weick, K.E., (2001), "Gapping the Relevance Bridge: Fashions Meet Fundamentals in Management Research", *British Journal of Management*, **12**, Special Issue, pp. S71-S75.

Womack, D.E., Flowers, S., (1999), "Improving system performance: a case study in the application of the Theory of Constraints", *Journal of Healthcare Management*, 4(5), pp. 397-407

Woodlock, P., (2001), "Corporate Resource and Risk Management", *The Ohio CPA Journal*, July-September, pp. 61-63.